

### **REMARKS**

Upon entry of the present Amendment, claims 18-20, 23-37 and 40-52 are pending. Claims 18-20, 23, 25-37 and 40-50 are amended; claims 21, 22, 38 and 39 are cancelled without prejudice or disclaimer; and new claims 51 and 52 are added by the present Amendment. The amendments to the claims are either editorial in nature, add limitations from a cancelled claim, or further define the claimed invention as discussed below. No new matter has been added, and entry of this amendment is respectfully requested. The amendments are supported by, at a minimum, FIG. 1.

As a preliminary matter, Applicant appreciates the courtesy of Examiner Syed T. Iqbal and Primary Examiner Wayne Langel during the personal Interview held on May 11, 2009. Although it is noted that the Examiner Interview Summary Record (PTOL-413) received from Examiners Langel and Iqbal indicate that it is not necessary for Applicant to provide a separate record of the substance of the Interview, a summary of the substance of this Interview is provided below.

### **SUMMARY OF SUBSTANCE OF INTERVIEW**

On May 11, 2009, a personal Interview was held including the following persons: Examiner Syed T. Iqbal, Primary Examiner Wayne Langel, and Applicant's representatives Dinh Nguyen and Ed Garcia-Otero.

The following issues were discussed: amending independent claims 18 and 34 to recite at least one of "autothermic reforming, partial oxidation, and vapor reforming" as recited in dependent claim 22 and 39 (and also canceling dependent claims 21, 22, 38 and 39); the possible use of formal Markush claim language; regarding dependent claim 22, Applicant's Representatives asserted that

CA 2200491, by Wolf Johnssen (hereinafter “Johnssen”), did not disclose selective oxidation at page 8; Applicant’s representatives also asserted that the features of dependent claims 23, 24 and 31 were not disclosed by the cited art; and Primary Examiner Wayne Langel agreed that the dependent claim 28 feature of supplying additional hydrocarbons to the reformer might not be disclosed in the cited art.

**REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH**

Claims 18-50 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 21, 22, 38 and 39 have been cancelled without prejudice or disclaimer.

In claims 18 and 34, the term “a highest possible proportion of hydrogen” has been amended to recite “a high proportion of hydrogen.”

In claims 25 and 26, the order of steps has been clarified.

Throughout the claims, the term “hydrogen carbons” has been replaced by “hydrocarbons.”

Regarding the term “at least one of” in claims 29-31 and 47, Applicant submits that while this term was not indefinite, it has nevertheless been modified by the foregoing amendments in order to render the rejection moot.

Regarding claims 18-50, the Office Action asserts that “proper” Markush language (as described by MPEP § 803.02) was not employed. For example, the preamble of claim 18 recited, “generating at least one of process heat and electrical energy.” The Office Action asserts that “proper” Markush language is mandatory, and that claim 18 must state, for example, “generating one member selected from the group consisting of.” Applicant respectfully disagrees.

Applicant submits that the rejection of the claims has been rendered moot by the foregoing amendments. For example, the preamble of claim 18 has been amended to recite, “generating at least one of process heat, electrical energy, or any combination thereof.”

Thus, reconsideration and withdrawal of the rejections of claims 18-20, 23-37 and 40-50 under 35 U.S.C. § 112, second paragraph, is requested.

**REJECTIONS UNDER 35 U.S.C. § 102(b) AND 103(a)**

Claims 18, 19, 27-30, 32-36, 43-46 and 48

Claims 18, 19, 27-30, 32-36, 43-46 and 48 were rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, rejected under 35 U.S.C. § 103(a) as being unpatentable over Larson et al. “Combined Biomass and Black Liquor Gasifier/Gas turbine cogeneration at pulp and paper mills,” translation of the ASME, July 1999 (hereinafter “Larson”).

Amended independent claim 18 recites, in part, “transforming hydrocarbons of the waste products utilized into a hydrogen-rich and a carbon monoxide-rich gas by the reformer through at least one of, autothermic reforming, partial oxidation, vapor reforming, or any combination thereof.”

The above-recited portion of claim 18 was previously recited in dependent claim 22, which was rejected under 35 U.S.C. § 103(a) as being unpatentable over Larson in view of Johnssen. Dependent claim 22 has been cancelled, and the features of dependent claim 22 have been inserted into independent claim 18. Independent claim 34 has been amended similarly to independent claim 18. Therefore, in the interest of compact prosecution, Applicant will address Johnssen immediately below with respect to independent claim 18.

The Office Action, at page 6 with respect to dependent claim 22, admits that Larson does not disclose partial oxidation, and asserts that Johnssen, at page 9, discloses partial oxidation. However, Applicant submits that Johnssen, at page 9, merely discloses Pressure Swing Adsorption (PSA), and does not teach or suggest partial oxidation as recited by amended independent claim 18.

Thus, Applicant submits that independent claim 18 is patentable over Larson, and also patentable over the combination of Larson in view of Johnssen.

Further, independent claims 34, 49 and 50 each contain the above recited feature of independent claim 18 (“transforming hydrocarbons of the waste products utilized into a hydrogen-rich and a carbon monoxide-rich gas by the reformer through at least one of, autothermic reforming, partial oxidation, vapor reforming, or any combination thereof”), and hence, are patentable over Larson and over the combination of Larson in view of Johnssen for, at a minimum, the same reasons as independent claim 18, as well as on their own merits.

Dependent claims 19, 27-30, 32, 33, 35, 36, 43-46 and 48 depend from independent claims 18 or 34, and are patentable over Larson and also patentable over the combination of Larson in view of Johnssen for, at a minimum, the same reasons as their respective base claims, as well as on their own merits.

Thus, reconsideration and withdrawal of the rejections of claims 18, 19, 27-30, 32-36, 43-46 and 48 under 35 U.S.C. § 102(b) or § 103(a) is requested.

Claims 20-26, 37-42, 49 and 50

Claims 20-26, 37-42, 49 and 50 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Larson in view of Johnssen.

Claims 21, 22, 38 and 39 have been cancelled.

As discussed above, independent claims 18, 34, 49 and 50 are patentable over Larson in view of Johnssen. Dependent claims 20, 21, 23-26, 37 and 40-42 depend from independent claims 18 or 34, and are patentable over Larson in view Johnssen for, at a minimum, the same reasons as their base claim, as well as for their own merits.

Thus, reconsideration and withdrawal of the rejections of claims 20, 21, 23-26, 37, 38, 40-42, 49 and 51 under 35 U.S.C. § 103(a) is requested.

Claims 31 and 47

Claims 31 and 47 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Larson in view of Fujimara EP1136542A1 (hereinafter “Fujimara”).

As discussed above, independent claims 18 and 34 are patentable over Larson in view of Johnssen. Fujimara merely discloses using “a fuel cell to generate electricity,” at column 3, line 11. Thus, Applicant submits that Fujimara does not remedy the deficiencies of Larson and Johnssen with respect to independent claims 18 and 34.

Dependent claims 31 and 47 depend from independent claims 18 and 34, respectively. Thus, Applicant submits that claims 31 and 47 are allowable for, at a minimum, the same reasons as their respective base claims, as well as for their own merits.

Thus, reconsideration and withdrawal of the rejections of claims 31 and 47 under 35 U.S.C. § 103(a) is requested.

### **NEW CLAIMS 51 AND 52**

In view of the concurrence of Primary Examiner Wayne Langel during the personal Interview on May 11, 2009 that the claim 28 feature of supplying additional hydrocarbons to the reformer might not be disclosed in the cited art, Applicant has added new independent claim 51, which all includes all of the features of dependent claim 28, base claim 18 and intervening claim 21.

Additionally, new independent claim 52 has been added, which is supported by FIG. 1 of the present application. New claim 52 recites all of the major components of FIG. 1.

Thus, Applicant submits that independent claims 51 and 52 are patentable over the cited art.

### **CONCLUSION**

Accordingly, reconsideration of the outstanding objections and rejections, and allowance of the present application and all the claims therein, are respectfully requested and believed to be appropriate.

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this reply should be construed as an intent to concede any issue

with regard to any claim, except as specifically stated in this reply, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed number.

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